UNIT 1 REVIEW

MC.

1. A

2. E

3. A

4. C

5. B

6. A

7. E

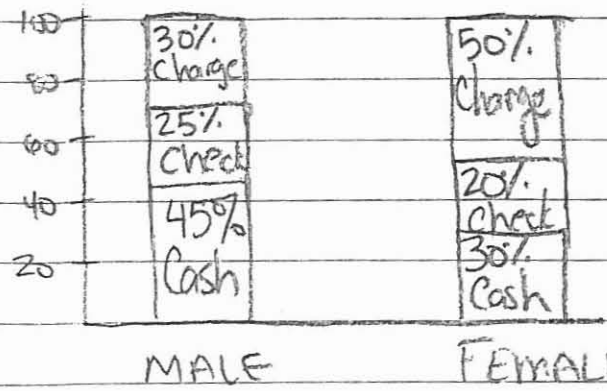
8. D

9. A

10. B

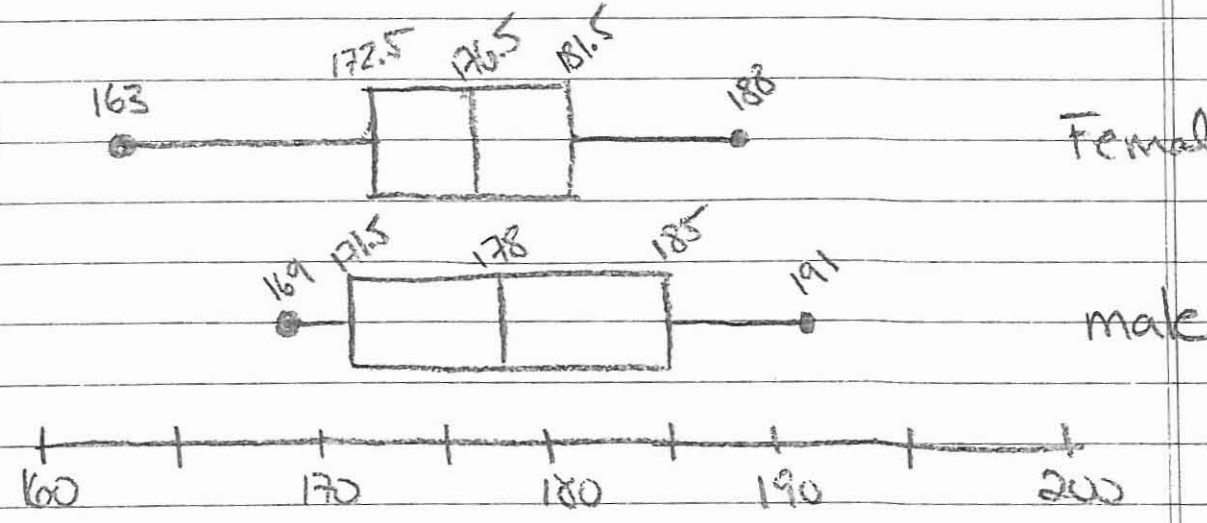
(11) a) 45% (18÷40)

b)



Yes, there does appear to be an association. Men appear to be more likely to use cash & female appear to be more likely to charge.

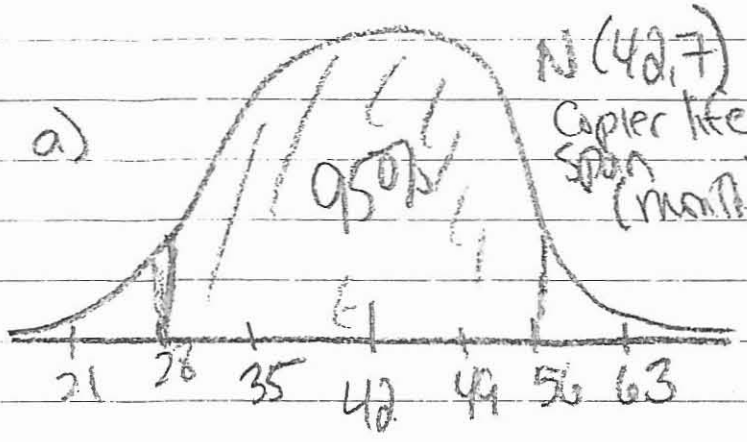
(12) a)



b) Both distributions of heights appear to be roughly symmetric, with the distribution of males maybe being slightly skewed right. The average height of males (178cm) is slightly higher than that of females (176.5cm) the height of males also has a larger IQR (13.5) than females (9), indicating less consistent heights. The range of both distributions are similar, males having a range of 22 cm & females 25 cm. Neither distribution had any outliers. Overall, the heights of males are higher than the heights of females as can be seen by the 5-number summaries, with the exception of the first quartile score, which is higher for females.

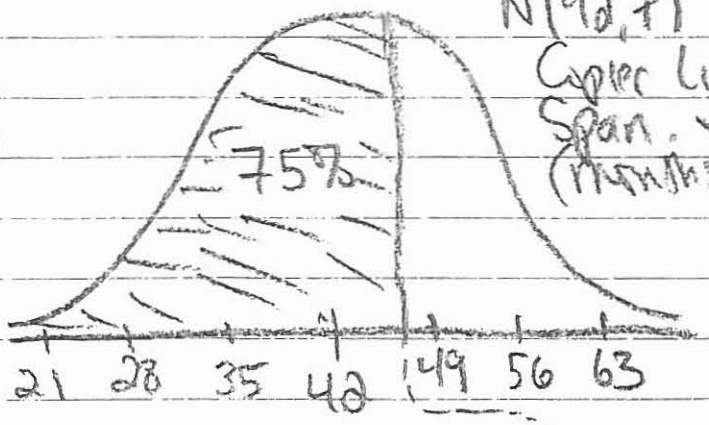
(13)

a)



Middle 95% is between 28 months & 56 months.

b)



Z-score of 3rd Quartile = .674

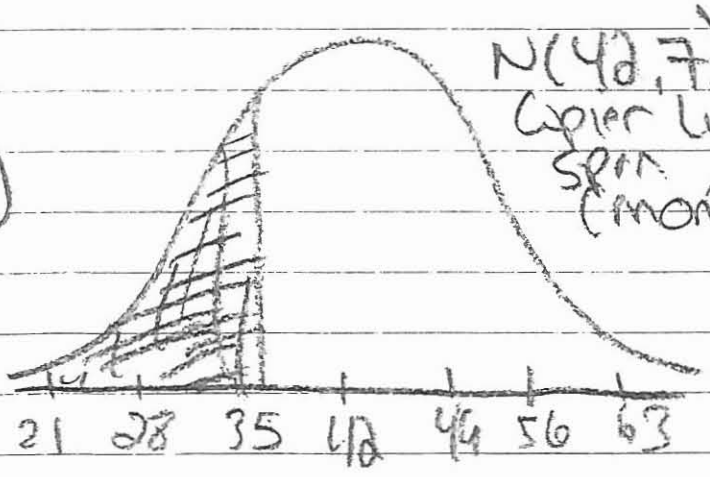
$$z = \frac{y-\mu}{\sigma}$$

$$.674 = \frac{y-42}{7}$$

$$y = 46.7$$

The 3rd quartile life span of a copier is 46.7 months.

c)



$$z = \frac{y-\mu}{\sigma}$$

$$= \frac{36-42}{7}$$

$$= -.857$$

P-value $= P(y < 36)$

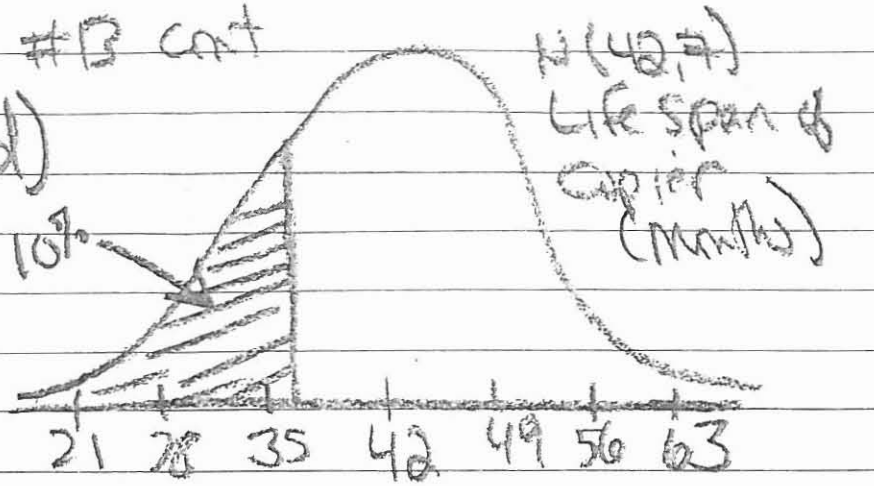
$= P(z < -.857)$

$= 19.6\%$

We would expect about 19.6% of the copiers to fail before 36 months.

#3 cont

d)



$$Z = \frac{Y - \mu}{\sigma}$$

$$-1.28 = \frac{36 - 42}{\sigma}$$

$$\sigma = 4.68$$

Z-Score for 10th percentile = -1.28

* In order to achieve a 36 month failure rate of 10%, the standard deviation would need to be approximately 4.68 — which shows that you would be increasing the consistency of the Caper's life span.